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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:	Rick K. SOUTHERN et al.	Confirmation No.:	1727
Application No.:	10/034,446	Group Art Unit:	3637
Filing Date:	December 26, 2001	Examiner:	Phi Dieu Tran A
For:	METHODS FOR ATTACHING SOLID HARDWOOD FLOOR PLANKS TO CONCRETE FLOOR SURFACES	Attorney Docket No.:	104981-4000

RESPONSE TO
NOTIFICATION OF NON-COMPLIANT APPEAL BRIEF

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In response to the Notification of Non-Compliant Appeal Brief mailed on May 1, 2006, submitted herewith is a corrected Appeal Brief.

No fee is believed to be due in connection with this filing. Should any fees be required, please charge such fees to Winston & Strawn LLP Deposit Account No. 50-1814.

Respectfully submitted,

Date: June 1, 2006

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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APPEAL BRIEF

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Appellant appeals to the Board of Patent Appeals and Interferences (the "Board") from the decision of the Examiner mailed July 11, 2005, rejecting claims 1-3, 5-7, 10, 12, and 14-20. The statutory small-entity fee of $250.00 is submitted herewith.

1. REAL PARTY IN INTEREST

The real party in interest is Richard P. Marshall Fine Flooring, Inc. ("Marshall"), having a business address of 12824 Cerise Avenue, Hawthorne, California 92050, the assignee of the entire right, title, and interest in the invention described and claimed in the above-identified patent application. The invention was assigned by Rick K. Southern and Richard P. Hirsch to Marshall. The assignment was recorded on February 12, 2002, at reel 012876, frame 0944.

2. RELATED APPEALS AND INTERFERENCES

Appellant and his legal representatives are not aware of any appeal or interference that directly affects, will be directly affected by, or will have a bearing on the Board's decision in this appeal.

3. STATUS OF CLAIMS

Claims 1-13 were submitted upon filing of application 10/034,446. In an Office Action dated December 20, 2002, claims 1-2 and 5-6 were rejected as being anticipated by U.S. Patent No. 2,860,385 to Cohn ("Cohn"); claims 3 and 10 were rejected as being unpatentable over Cohn; claims 4, 7-9, and 11-13 were rejected as being unpatentable

over Cohn in view of U.S. Patent No. 5,894,700 to Sweet ("Sweet"). In a response filed on March 20, 2003, claims 4 and 11 were cancelled and claims 1-3 and 5-6 were amended.

In a Final Office Action dated July 2, 2003, claims 1-3, 5-7, 10, and 12 were rejected as being unpatentable over Cohn in view of Sweet, and claims 8-9, and 13 were rejected as being unpatentable over Cohn in view of Sweet. Claims 1, 5, and 10 were amended and claims 8-9 and 13 were cancelled in an amendment under 37 C.F.R. § 1.116 filed October 30, 2003. An interview with the Examiner was held on November 6, 2003.

An Advisory Action mailed November 12, 2003, indicated that the amendment under 37 C.F.R. § 1.116 would not be entered because the proposed amendments raise new issues that would require further consideration and/or search. A Continued Prosecution Application was filed on November 25, 2003 to enter the amendments of October 30, 2003. A Preliminary Amendment was also filed on November 25, 2003.

This application was treated as a Request for Continued Examination by the Office, as noted in the Office Action mailed on January 6, 2004. In this Office Action, claim 1 was rejected as being indefinite; claims 1-3, 5-7, 10, and 12 were rejected as being unpatentable over U.S. Patent No. 2,088,238 to Greenway ("Greenway") and U.S. Patent No. 5,570,554 to Searer ("Searer") in of U.S. Patent No. 3,616,117 to Anderson et al. ("Anderson"). In an Amendment dated January 27, 2004, claim 1 was amended.

In a subsequent non-final Office Action mailed April 15, 2004, claims 1-3, 5-7, 10, and 12 were rejected as being unpatentable over Greenway in view of U.S. Patent No. 3,740,910 to Taylor ("Taylor") and Searer. A Request for Reconsideration was filed on July 2, 2004, including the Declarations of Joseph J. Grady and Richard P. Hirsch under 37 C.F.R. § 1.132 in support of Appellant's position.

In a Final Office Action mailed October 20, 2004, claims 1-3, 5-7, 10, and 12 were again rejected as being unpatentable over Greenway in view of Taylor and Searer. A Response to the Final Office Action was filed on January 13, 2005.

An Advisory Action mailed on February 7, 2005 indicated that the January 13, 2005 Response would not be entered for purposes of an appeal, and that the request for reconsideration does not place the application in condition for allowance because the combination of the references meets the claimed limitations. A Request for Continued Examination was filed on April 20, 2005, which included a Preliminary Amendment amending claim 1 and adding new claims 14-20.

In a non-final Office Action mailed July 11, 2005, claim 15 was rejected as failing to comply with the enablement requirement and as being indefinite; claims 1-3, 5-7,

10, 12, and 16-20 were rejected as being unpatentable over Greenway in view of Taylor and Searer; and claims 14 and 15 were rejected as being unpatentable over Greenway in view of Taylor and Searer and further in view of U.S. Patent No. 5,951,796 to Murray ("Murray").

Claims 2, 3, 5-7, 10 and 12 have been twice rejected in the their present form.

Claims 1-3, 5-7, 10, 12, and 14-20 are presented in Appendix A.

4. STATUS OF AMENDMENTS

Claims 4 and 11 have been cancelled, and claims 1-3 and 5-6 have been amended.

In an amendment under 37 C.F.R § 1.116 filed October 30, 2003, claims 1, 5, and 10 were amended, and claims 8-9 and 13 were cancelled.

A Continued Prosecution Application was filed on November 25, 2003, to enter the amendments of October 30, 2003.

In an Amendment dated January 27, 2004, claim 1 was amended.

A Request for Reconsideration was filed on July 2, 2004, including the Declarations of Joseph J. Grady and Richard P. Hirsch under 37 C.F.R. § 1.132 in support of Appellant's position.

A Response to Final Office Action was filed on January 13, 2005, making no amendments.

A Request for Continued Examination was filed on April 20, 2005, which included a Preliminary Amendment amending claim 1, and adding new claims 14-20.

5. SUMMARY OF CLAIMED SUBJECT MATTER

The present invention generally relates to a novel floor and methods of manufacturing the floor with plank hardwood floor boards attached to a concrete floor surface. The following is a summary of the claimed subject matter and the support therefor.

Claim 1 defines a method for attaching solid hardwood planks to a concrete surface including preparing solid wood floorboards having a length of at least about 3 feet for attachment (Application, page 2, lines 3-5) to a concrete floor surface (Application, page 1, lines 4-9) and then applying the floorboards to the concrete floor surface with at least one water resistant, water-impermeable adhesive (Application, page 1, lines 18-19) in sufficient quantity to attach the floorboards to the concrete surface (Application, page 3, lines 10-19). After the applying step, the floorboards are nailed to the concrete floor surface at substantially right angles to the concrete surface through the floorboards (Application, page 3, lines 20-25 and Figure 2, nail 22, 23, 24 pass through the planks 6, 7, 8, 9 and the adhesive layer 12 into the concrete slab 1). The adhesive is then allowed to set (Application, page 1,

line 26 and page 4, lines 16-20). Claim 18 defines that the floorboards are nailed through the adhesive layer (Application, page 1, lines 24-25).

Claim 20 also defines a method for attaching solid hardwood planks to a concrete floor surface including preparing floorboards of at least about 3 feet (Application, page 2, lines 3-5) for attachment, applying at least one water-resistant, moisture curable adhesive to attach the floorboards (Application, page 1, lines 18-20), nailing the boards to the concrete floor surface (Application, page 3, lines 20-25 and Figure 2, nail 22, 23, 24 pass through the planks 6, 7 , 8, 9 and the adhesive layer 12 into the concrete slab 1), and allowing the adhesive to set (Application, page 1, line 26, and page 4, lines 16-20).

Claim 5 defines a floor having a concrete surface with solid plank wood floorboards of at least 3 feet (Application, page 2, lines 3-5) adhesively attached to the concrete (Application, page 1, lines 13-26 and page 4, lines 21-22), without a subflooring between the boards and the concrete floor surface (Application, page 1, lines 4-6). The adhesive is water resistant and impermeable (Application, page 1, lines 18-20 and page 3, lines 12-16). A plurality of nails extend through the floorboards and through the adhesive, at right angles to the concrete floor (Application, page 1, lines 24-26; page 3, lines 20-25; and Figure 2, nail 22, 23, 24 pass through the planks 6, 7, 8, 9 and the adhesive layer 12 into the concrete slab 1).

The methods and floor of the present invention provide numerous surprising advantages over the prior art. Among the advantages, the combination of nails with water resistant, water/moisture impermeable, moisture-curable adhesive allows the flooring of the present invention to survive water logging and withstand the resultant warping due to increased hydrostatic pressure. The flooring can therefore maintain its appearance and functionality. Nails advantageously are provided in the claimed invention, which can ensure that the wood floorboards are held flat against the concrete surface with the adhesive therebetween to allow the adhesive to set and provide the proper contact. In contrast to applying nails in wood, the advantage of nailing at substantially right angles in concrete is that it prevents chipping of the concrete that results when more inclined angles are used.

Wood planks of conventional flooring, however, need to be very flat in order to use an adhesive to attach the wood directly to concrete and to ensure proper and sufficient contact between the floorboards, adhesive, and concrete.

Also, unlike conventional methods, the presently claimed invention does not limit the types of preparations possible for the wood, particularly preparations that cause wood to warp. Warping, which is most common in certain types of wood preparation

conducted away from the installation site, makes it difficult or impossible to produce a strong adhesion to the concrete subflooring by merely laying the floorboards on the adhesive.

Claim 14 recites that the adhesive comprises a moisture-curable polyurethane-based composition (Application, page 1, lines 18-24 and page 3, lines 14-17), and claim 15 specifies that the adhesive comprises a prepolymer including a polyol and an isocynate (Application, page 1, lines 18-24). These adhesives are especially reliable in the environment of wooden floorboards laid on concrete, and the moisture curability of the adhesives provide surprising advantages because the adhesive can cure even the presence of high levels of moisture. Appellant notes that claim 15 appears herein with a typographical error appearing as dependent from claim 13, which is cancelled. This is clearly a typographical error, and claim 15 has been properly considered for substantive purposes as depending from claim 14 in the Office Action of July 11, 2005, on page 3. Appellant thus respectfully requests that the Board treat claim 15 as dependent from claim 14, and that an amendment be entered making this correction.

Claim 17 defines that the floorboards are prepared with surface features, including a wormhole and scratches (Application, page 1, lines 9-12; page 2, lines 22-25; Figure 2, wormholes and scratches 25, 26, 27), having nails that are hidden by nailing in those features (Application, page 2, lines 24-25 and page 5, lines 20-22).

Claims 19 and 20 recite methods that include allowing the adhesive to set with the boards nailed to the concrete floor surface (Application, page 1, lines 23-26 and page 3, lines 20-22). This provides the surprising advantage over the art that the boards can be held in place for proper adhesion, even if the boards would tend to otherwise warp away from the concrete surface. This is especially beneficial, for instance, when the hydrostatic pressure in floorboards becomes elevated, causing the boards to warp, especially since the adhesive used can withstand the moisture, such as from water logging.

6. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 1-3, 5-7, 10, 12, and 16-20 are rejected under 35 U.S.C. § 103(a) as being obvious over Greenway in view of Taylor and Searer. Claims 14-15 are rejected under 35 U.S.C. § 103(a) as being obvious over Greenway in view of Taylor and Searer and in further view of Murray.

7. ARGUMENT

The Examiner's rejections of the pending claims are in error because the nature of the product and processes of the invention are neither taught nor suggested in the disclosure in Greenway, Taylor, Searer, Murray, or any feasible combination thereof, and the

present claims are therefore not rendered obvious by these references. For the reasons below, Appellant respectfully requests that the Examiner's obviousness rejections be reversed, and that claims 1-3, 5-7, 10, 12, and 14-20 be allowed.

A. The Taylor Reference Is Nonanalogous Art to the Invention

As noted above, the rejection of claims 1-3, 5-7, 10, 12, and 16-20 relies on the combination of Taylor with Greenway and Searer. Prior to making a finding on the scope and content of the prior art, however, it must first be determined whether the prior art is analogous to the presently claimed invention.[1] To be considered analogous, the subject matter disclosed in the art must not only be in the same field, but must also be relevant to the particular problem of the invention.[2]

The "[p]recise definition of the problem is important in determining whether a reference is from a nonanalogous art," and therefore, it is important to look beyond simply conceptual similarities and look to purpose of the invention.[3] In this instance, the precise wall-related problems resolved by Taylor are not analogous to the flooring-related problems solved by the presently claimed invention.

The rejection of all the claims relies on combining Taylor with Greenway and Searer. Taylor addresses a problem not addressed in the presently claimed invention, however. Taylor is directed to walls, particularly to attaching drywall to spaced, vertical, wooden wall studs, which are separated by porous insulation.[4] The attached drywall is also disposed vertically. Because of this vertical position, nails are used to prevent the drywall from falling away from the studs due to gravity while adhesive cures therebetween.

In contrast, each of claims 1-3, 5-7, 10, 12, and 16-20 concerns a floor, which, by its very nature, is disposed generally horizontally, as wooden floorboards are installed directly on a concrete surface. This involves significantly different problems to be overcome

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1 *In re Clay*, 966 F.2d 656, 658 (Fed. Cir. 1992); *see also*, *State Contracting & Eng'g Corp. v. Condotte America, Inc.*, 346 F.3d 1057 (Fed. Cir. 2003) ("A prerequisite to making a finding on the scope and content of the prior art is to determine what prior art references are pertinent").

2 *In re Deminski*, 796 F.2d 436 (Fed. Cir. 1986) (holding that the two-step test to determine analogous art is whether the reference is within the field of the inventor's endeavor and whether the reference is reasonably pertinent to the particular problem with which the inventor was involved); *Wang Labs. v. Toshiba Corp.*, 993 F.2d 858 (Fed. Cir. 1993).

3 *Ex parte Dussaud*, 7 U.S.P.Q.2d 1818, 1819 (Bd. Pat. App. & Int'f. 1988).

than in attaching drywall to vertical, spaced studs, and vice versa.[5] As opposed to the wall construction of Taylor, there is no need to hold floorboards against gravity, and in fact, gravity is a beneficial force in flooring because it holds the boards down.[6]

Moreover, the presently claimed invention is concerned with problems that are not addressed in Taylor. One problem with wood flooring on concrete is that the concrete can prevent water from draining away from the floorboards because floors are generally horizontal, thereby trapping moisture (*e.g.*, rain) in contact with the wood and causing wood to tend to pull away from the concrete due to hydrostatic pressure. Very strong adhesives that can resist this warping and water are needed to retain the attachment of the floorboards to the concrete under these conditions. If the adhesive cannot withstand this water and its effects on the wood floorboards, then the trapped water can destroy the adhesive bond between the wood and the concrete surface and can destroy the floor.[7] The presently claimed invention provides a strong attachment, which can withstand hydrostatic pressure and maintain the flooring even with elevated hydrostatic pressure, and nails to help keep the attachment in place before the adhesive is fully cured.[8]

Remedying highly elevated moisture-related problems is not contemplated by Taylor. Moisture is not collected in the walls of Taylor because it is allowed to drain vertically between the studs due to gravity. In addition, there is nothing to trap the moisture because the studs are spaced, and the insulation between the studs would not prevent this drainage. Also, even if there were a mechanism in Taylor that could trap moisture, at least the drywall would be ruined and unusable.[9] Hence, the wall would be ruined, and there is no reason to contemplate saving the adhesive in the presence of very high levels of moisture.

Another problem addressed by the presently claimed invention is to permit floorboards to be used that are prepared by processes that produce warped wood, particularly in certain off-site floor preparations, as defined in claim 16. As Mr. Hirsch explains in his declaration, prior to the present invention, wood flooring needed to be very flat if adhesives

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4 Taylor 4:49-50.

5 Supp. Hirsch Declaration ¶ 9.

6 *Id.* at ¶ 13.

7 *Id.* at ¶ 5.

8 *Id.* at ¶ 6.

were to be used to attach the wood flooring directly to concrete for ensuring proper and sufficient contact between the floorboards, adhesive, and the concrete.[10] This significantly limited the type of preparations of the wood that could be used prior to the floor installation.[11]

To the contrary, Taylor is not concerned with using warped drywall since drywall is always manufactured in a generally uniform appearance - very regular and flat sheets - so there is no problem of attaching any warped sheets to wall studs.[12]

Since Taylor and the present invention are not concerned with the same problems, Taylor is nonanalogous to the presently claimed invention. Accordingly, Taylor should be excluded from an obviousness analysis of the claims.

B. <u>There Is No Motivation to Combine the References or Suggestion of the Claimed Invention</u>

With respect to the rejection under 35 U.S.C. § 103(a) of claims 1-3, 5-7, 10, 12, and 16-20, as being obvious over Greenway in view of Searer and in further view of Taylor, the Examiner failed to establish a proper basis for the obviousness rejection because there is: 1) no motivation to combine the references, and 2) no suggestion of the claimed invention. To establish a obviousness rejection, there must be a showing that there is a motivation to combine the prior art and that the combination of the prior art teaches or suggests each and every element of the claimed invention.[13] Lack of a motivation or suggestion demonstrates the patentability of the claims over the cited references.[14]

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9 *Id.* at ¶ 9.

10 *Id.* at ¶ 4.

11 *Id.*

12 *Id.* at ¶ 12.

13 *In re Lee*, 277 F.3d 1338 (determining that the Board of Patent Appeals and Interferences improperly relied upon common knowledge and common sense of person of ordinary skill in art to find the invention obvious over combination of two prior art references, since factual question of motivation to select and combine references could not be resolved on subjective belief and unknown authority); *see generally*, *In re Bond*, 910 F.3d 831 (Fed. Cir. 1990) (finding a claimed invention not obvious when the teachings of the two prior art references provided no teaching, suggestion or incentive supporting the combination); *Elf Atochem North America, Inc. v. LaRoche Indus.*, 85 F. Supp.2d 336, 343 (D. Del. 2000) ("Two or more prior art references may be combined to demonstrate obviousness, but the prior art must provide a suggestion or motivation to combine the references"); *see generally*, Chisum, D. *et al.*, Principles of Patent Law, Foundation Press, 1998, pages 530-728.

i. Searer is incompatible with Greenway and Taylor

It is well established that "it is improper to combine references where the references teach away from their combination," but the Examiner nevertheless combined the diametrically opposed teachings of Greenway and Searer.[15]

Specifically, Greenway teaches using mastic as an adhesive, without nails, where floorboards are attached to concrete. Greenway uses nails only when attaching floorboards to a wooden subflooring.[16]

On the contrary, the problem overcome by Searer is expressly that the methods of fastening floor members using chemical adhesives is not desired. Searer seeks to eliminate the hazards associated with the use of adhesives by having flooring "attached to the appropriate surface without the use of adhesives."[17]

One of ordinary skill in the art would view Searer as expressly intending to avoid using adhesives and any problems that are caused therefrom, such as the production of toxic or harmful chemical substances. As declared by Mr. Hirsch, one of ordinary skill in the art would have found that "the use of any adhesive in attaching floorboards is expressly contrary and repulsive to the teaching of Searer."[18] Mr. Hirsch opines that the Greenway teaching of using mastic as an adhesive cannot be reconciled with Searer's teaching of not using any adhesive, because this would be directly contrary to Searer's explicit teaching.[19] It

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14 *In re Lee*, 277 F.3d at 1338.

15 *See, McGinley v. Franklin Sports, Inc.*, 262 F.3d 1339 (Fed. Cir. 2001) ("We have noted . . . , as a 'useful general rule,' that references that teach away cannot serve to create a prima facie case of obviousness"); *In re Haruna*, 249 F.3d 1327 (Fed. Cir. 2001) ("A prima facie case of obviousness can be rebutted if the applicant . . . can show 'that the art in any material respect taught away' from the claimed invention."); *In re Dow Chemical Co.*, 837 F.2d 469 (Fed. Cir. 1989); *In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994) (opining that a reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant and that a reference will teach away if it suggests that the line of development flowing from the reference's disclosure is unlikely to be productive of the result sought by the applicant).

16 Greenway 2:31-34.

17 Searer 1:16-24 and 2:21-30 (emphasis added).

18 Supp. Hirsch Declaration ¶ 8.

19 *Id.* at ¶ 15.

is thus clear that the Searer disclosure literally and expressly teaches one of ordinary skill in the art not to use adhesives.

Moreover, the teaching of each of the references used in a rejection must "be considered in its entirety, *i.e.*, as a whole, including positions that would lead away from the claimed invention."[20] The "totality of the prior art must be considered, and proceeding contrary to accepted wisdom in the art is evidence of nonobviousness."[21] Making the combination proposed in the rejection would require ignoring a major portion of the Searer reference. The nails of Searer cannot merely be selected to combine with the teaching of Greenway, since the totality of the Searer teaching explicitly has much to say about avoiding the use of any adhesives. As a result, the disclosure in Searer that contradicts the motivation to combine, such as the section that teaches away from using adhesives, cannot be ignored when proposing a combination with Greenway.

Even though the Taylor teaching is not related to flooring, it still requires the use of adhesives, and for the reasons stated above, its teachings are also contradictory to Searer. Thus, no combination between Searer and Taylor is possible.

One of ordinary skill in the art would not have found any motivation to combine Greenway, which uses mastic as an adhesive, with a reference that teaches away from using any kind of adhesive as does Searer.[22] Similarly, there is no way to combine the Searer teaching with Taylor without impermissibly ignoring material portions of the Searer teachings. Because the cumulative teachings of Greenway and Searer, and of Searer and Taylor, are contradictory, and the totality of the teachings and disclosures of these two references do not suggest the claimed invention.

ii. There is no motivation or suggestion to combine Searer, Greenway, and Taylor

The Examiner contends in the rejection in the Office Action of July 11, 2005 (herein known as the "Office Action"), that it would be obvious to modify Greenway to make

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20 *W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540 (Fed. Cir. 1983) (suggesting error for considering the references in less than their entireties, *i.e.*, in disregarding disclosures in the references that diverge from and teach away from the invention at hand) (emphasis added).

21 *Id.* at 1550.

22 Supp. Hirsch Declaration ¶ 8.

the adhesive water-resistant and water-impermeable, as allegedly taught by Taylor.[23] The Examiner states, as a reason for this, that this construction would prevent the adhesive from being damaged by water.

There is no suggestion in Greenway of any need to make the floor waterproof, and no motivation to look to any other reference for this purpose. Greenway uses mastic, which is not water resistant or water impermeable.[24] There was no expectation that the floor could be saved upon water logging or that non-flat wood boards could be used, so no motivation was present to try to solve these problems.[25] The mastic of Greenway would not resist the problems encountered with a water logged subflooring and would result in destroyed flooring.

Searer too lacks any motivation to provide a floor that can resist water logging or be made with warped wood planks. The adhesive-free, nailed boards would readily pull away from the concrete subflooring in these conditions. Thus, there would have been no motivation to look to a reference such as Taylor to provide water resistance and impermeability, because, like Greenway, Searer provides no suggestion or expectation that the flooring would survive water logging or be attached using non-flat planks.[26]

Contrary to the allegations by the Examiner, Taylor cannot be relied upon as a reference to unify the disclosure of Searer and Greenway. As declared by Mr. Hirsch, drywall is not susceptible to hydrostatic pressure in the manner that wooden floorboards are, in which an elevated pressure can produce an extremely powerful warping that could peel the boards away from the subflooring.[27] In fact, Mr. Hirsch explains that if moisture were absorbed in drywall, it would most likely be ruined, and another piece of drywall would need to replace it.[28] In Mr. Hirsch's opinion, there is thus no motivation to try to save the adhesion of a water-logged piece of drywall.[29]

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23 Office Action, Page 4.

24 Greenway 2:31-34.

25 Supp. Hirsch Declaration ¶ 7.

26 *Id.* at ¶¶ 15 and 16.

27 *Id.* at ¶ 9.

28 *Id.*

Moreover, the problem of water-logging is not present in walls, as it is in floors, because the walls are vertical. On horizontal floors, moisture can collect adjacent to an extremely large portion of the wood flooring surface and can even cause the flooring to become water logged or even submerged. This is not possible with the Taylor walls since their orientation would drain the water away between the spaced, narrow studs. There is no mechanism that could possibly collect the water and hold it against the drywall, as would be the case with the water held in contact with the floorboards by a concrete subflooring.[30] Any water-impermeable adhesive in Taylor would merely have to withstand minute amounts of water, compared to flooring, as it drains past the adhesive.

The rejection of the independent claims further states the allegedly obvious modification of Greenway in light of the Searer and Taylor teachings would include nailing the boards to the concrete surface pursuant to Searer, "because having nails going through floor boards to the concrete surface at right angles thereto through the boards and the adhesives would enable the adhesive to hold onto the boards while nailing the boards in positions and enable the adhesives to bond the boards in place upon drying without having to have a person holding the boards in place."[31]

First, nowhere in the record is it established, or even hinted, that floorboards were ever held down while adhesive dries, or cures, thereunder. The curing of the adhesive takes hours, and it is hard to imagine that an installer would ever have an employee waiting for hours holding down floorboards. Moreover, any non-flat condition in a floor board that is warped before adhering would likely require very extensive pressure, with a high level of force. It is unlikely that enough persons could be placed on top of warped floorboards to ensure a proper flatness and contact between the boards and the subflooring. Even if this were possible, one would imagine a room full of people standing on the floorboards being glued. The unreasonableness of the Examiner's proposed problem that is allegedly solved by the combination of references illustrates the tenuous nature of the rejection.

Additionally, the Examiner's contention that the prior art required people to hold the wood while the adhesive dries when there is any warping in the wood ignores Mr. Hirsch's declared statement that, until the present invention, it was not possible to adhere

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29 *Id.* at ¶ 10.

30 *Id.*

31 Office Action, Page 4.

warped wood to concrete.[32] This evidence establishes both that the alleged problem was not actually a problem in the prior art and that, if such an impractical method installation was in use, it still would not have made it possible to adhere warped wood to concrete.

Furthermore, as noted previously, Greenway boards must be flat to allow adhesive to dry. In addition, Searer provides no suggestion that the nails can be used for warped wood, and as a permanent method of installing floors, purposefully without the adhesive, since the warped wood would likely pull the nails out of the concrete after a period of use. Accordingly, neither of these two references indicate that installing warped wood on concrete is even a problem to be solved.

Drywall is manufactured in very regular and flat sheets, and there is no curing-induced warping of the drywall prior to beginning the installation thereof, as there may be in wood floorboards.[33] Mr. Hirsch explained that the reason for Taylor's use of nails along with an adhesive is because the Taylor drywall is adhered to the studs in a vertical position, the drywall would naturally tend to fall away from those studs before the adhesive sets, and thus, the nails are needed to hold the drywall in a vertical position against gravity. In contrast, gravity is beneficial in holding flooring against subflooring and clearly would not tend to peel the flooring away from the subflooring.[34] It is Mr. Hirsch's opinion that the Taylor reference does not provide any suggestion that using the nails, in addition to adhesives, would be helpful when installing flooring, since the purpose of the nails in Taylor is to resist gravity, which is not applicable when installing flooring.[35]

One of ordinary skill in the art of flooring would not have looked to the Taylor reference to modify Greenway or Searer, because it would not provide solutions to the problems relevant in flooring and does not even address the alleged motivation stated in the rejection of avoiding the need for people to hold down warped floorboards addressed by the presently claimed invention. The rejection is incorrect in its assertion that Taylor teaches or provides a method to keep any kind of board attached during adhesion while overcoming a warped condition of the board. With respect to the manufacturing processes that can produce

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32 Supp. Hirsch Declaration ¶ 4.

33 *Id.* at ¶ 12.

34 *Id.* at ¶ 13.

35 *Id.*

warped floorboards, these would have been traditionally unusable for adhering to concrete.[36] There is accordingly no motivation or suggestion to combine the teachings of the references to thereby obviate the presently claimed invention.

As noted above, the Examiner has alleged that there is a motivation to make the adhesive resist water, and to add nails to solve the unrealistic problem of people holding down warped floorboards which adhesive dries. As explained, however, this motivation is absent from the prior art, and the only source for this motivation is the disclosure of the present application, and the argumentation and declarations that were submitted by the Applicant during prosecution. The rejection is thus made using hindsight, which relies on the Applicant's own filings, which is impermissible under the law.[37] In fact, the Federal Court of Appeals for the Federal Circuit has noted that hindsight must be guarded against, particularly in mechanical inventions, where there is a tendency to pick and choose sections from references to support an obviousness rejection while ignoring the totality of the teachings.[38] Since the prior art itself provides no motivation to solve the problems that the rejection alleges, the basis for the rejection is improper.

The Examiner alleges that Taylor is relevant because it "discloses a board being secured to a substructure."[39] The Examiner's allegation is overly broad, however, because floorboards have very different characteristics than drywall, and concrete subflooring has very different characteristics than spaced wood studs.[40] Concrete is different because subflooring is generally horizontal and can trap water, as described above. Also, suitable methods for attaching anything to concrete are significantly different than methods for attaching things to wood, as explained above, for example. Even the orientation of the nails is different on walls, as well as the type of nails used, the strength of the attachment, and the

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36 *Id.* at ¶ 4.

37 *Texas Instruments v. United States ITC*, 988 F.2d 1165, 1178 (Fed. Cir. 1998) (it is impermissible to piece the invention together using another patented invention as a template).

38 *Ruiz v. A.B. Chance Co.*, 234 F.3d 654, 665 (Fed. Cir. 2000) (explaining that the temptation to engage in impermissible hindsight is especially strong with seemingly simple mechanical inventions). As previously discussed, the Greenway teaches away from Searer, and therefore these references are incompatible.

39 Office Action, Page 4.

40 Supp. Hirsch Declaration ¶¶ 10-12.

type of adhesives used. Furthermore, while the concrete traps water, wood studs would not resist the water, as does the concrete, if somehow the studs were submerged.

The floorboards have no parallel in the drywall since the effect of the water on floorboards is to powerfully tend to warp the floorboards, whereas similar exposure of drywall to water would simply ruin the drywall.[41] Again, the horizontal orientation of the floorboards exposes them to water logging in a manner that would not occur in vertical studs.[42]

Since there are no parallel structures between the Taylor teaching and the floorboard teachings, any suggestion, without relying on hindsight as to how to combine the teachings, is conspicuously absent from the prior art.

iii. Unexpected benefits

The combination of references does not suggest the unexpected benefits of the present invention, and therefore the references could not suggest the presently claimed invention.[43]

As previously noted, the invention of claims 1, 5, and 20 provides the surprising benefits of being able to use warped wood and being resilient to the effects of elevated hydrostatic pressure. In the Office Action, the Examiner explicitly indicated that he was ignoring all argumentation regarding the surprising benefits related to increased hydrostatic pressure.[44] This is improper, and the argumentation, as well as the ample evidence presented in various declarations, must be considered, including correspondence, photographs, and samples from a floor installer.[45]

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41 *Id.* at ¶ 10.

42 *Id.*

43 *In re Chupp*, 816 F. 2d 643, 646 (Fed. Cir. 1987) (finding of nonobviousness by showing that the claimed invention was more effective than the closest prior art); *In re Application of Meyer*, 599 F.2d 1026, 1031 (C.C.P.A. 1979) (finding of nonobviousness where an unexpected characteristic of the claimed process is not suggested by the art).

44 Office Action, Page 6.

45 Evidence traversing rejections, when timely presented, must be considered by the Examiner whenever present. Evidentiary support may be provided in the Specification and the Declarations. *In re Piasecki*, 745 F.2d 1468, 1471, 223 U.S.P.Q. 785, 787 (Fed. Cir. 1984); *Ashland Oil v. Delta Resins & Refractories*, 776 F.2d 281, 308 (Fed. Cir. 1985). The Examiner must consider each item of evidence, including evidence not expressly provided in the specification, for its disclosure of advantages, as long as the claimed invention is fully

Using nails in addition to adhesives keeps the floorboards in proper contact with the adhesive, and the adhesive in proper contact with the concrete surface, while the adhesive cures, resulting in a much improved resistance to warping of the wood, for example, due to certain preparation processes or hydrostatic pressure. As Mr. Hirsch declared, in conventional curing, it is not possible to attach warped wood to concrete.[46]

Additionally, claim 20 describes a method of attaching floorboard to concrete subflooring, in which the moisture curability of the adhesive provides surprising benefits since the adhesive can cure even though elevated moisture is present.

Claims 19 and 20 recite that the adhesive sets after the floorboards are nailed, specifically highlighting a surprising benefit provided by the nails in retaining proper contact with the floorboards, adhesive, and the concrete surface while the adhesive cures. As explained above, this is especially beneficial, for instance, when the hydrostatic pressure in floorboards becomes elevated due to water logging of the boards during curing. Evidence of this surprising benefit is discussed in declarations by Hirsch and Baugher.[47]

The adhesive and the wood floorboard themselves would have been expected to fail upon water logging, and prior to the present invention, warped wood could not be attached to concrete.[48]

Greenway does not provide any suggestion that warping or water are problems to be solved, and accordingly only discloses a non-water-resistant mastic and flat floorboards. Searer also does not suggest a manner in which warped wood can be adhered to concrete, since its boards would also peel away from the concrete upon warping, and Searer has nothing to do with adhesives. Finally, Taylor's installation of drywall does not foresee any of

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supported. *See generally*, *Ex parte The NutraSweet Co.*, 19 USPQ2d 1586 (Bd. Pat. App. & Inter. 1991) (discussing the practical advantage of unexpected results). The record of evidence includes declarations under 37 C.F.R. § 1.132 by three declarants, including Joseph Baugher (the "Baugher Declaration"), Joseph Grady (the "Grady Declaration"), and Richard Hirsch. Richard Hirsch provides three declarations, a declaration of October 29, 2003 (the "First Hirsch Declaration"), a declaration of July 2, 2004 (the "Second Hirsch Declaration"), and the Supplemental Declaration (the "Supp. Hirsch Declaration"), that support the nonobviousness of the present claims over the references. Copies of these declarations are found in Appendix B.

[46] Supp. Hirsch Declaration ¶ 4.

[47] *See, e.g.,* Supp. Hirsch Declaration ¶ 16 and Baugher Declaration ¶ 2-3.

[48] Supp. Hirsch Declaration ¶¶ 4 and 20.

the warping problems associated with wooden floorboards, as the drywall would not initially be warped, and would become ruined by logged water.[49]

The invention of claims 1, 5, 19, and 20 are patentably distinct from the references and any combination thereof because the benefits it provides would have been surprising in view of the prior art. Because there is no suggestion to combine the references to disclose the presently claimed invention, there can be no basis for the Examiner's obviousness rejection.

Additionally, claim 17 defines that the nails are hidden in wormholes and/or scratches in the wood. This feature provides the surprising advantage that the hiding of the nails can be achieved by taking advantage of ornamental features that are created anyway, such as to make newly installed floorboards look like they are actually aged.[50] This is clearly neither taught nor suggested in any of the references and is not addressed at all in the rejection. The Examiner merely mentions that nails in Searer are installed in surface features, but the Examiner ignores that the claimed features are wormholes and scratches, as opposed to nailing in a hidden joint made to fit with another wood plank.[51]

C. Evidence of Secondary Considerations

The Examiner rejected at least claims 1-3, 5-7, 10, 12, and 16-20 without giving due consideration to the evidence presented. The U.S. Supreme Court has established that secondary considerations of nonobviousness must be considered during the examination of claims.[52] These secondary considerations "must be considered in every case in which they are present[, and when] evidence of any of these secondary considerations is submitted, the

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49 *Id.* at ¶ 17.

50 *Id.* at ¶ 21.

51 Office Action, Page 4.

52 *See, Graham*, 383 U.S. 1 (1966); *See also, Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530 (Fed. Cir. 1983) (stating that it is jurisprudentially inappropriate to disregard any relevant evidence on any issue in any case, patent cases included. Thus evidence rising out of the so-called "secondary considerations" must always when present be considered en route to a determination of obviousness); *In re Huang*, 103 F.3d 135 (Fed. Cir. 1996) (including evidence of commercial success, long-felt but unsolved needs, failure of others, and copying as secondary considerations); *Ashland Oil v. Delta Resins & Refractories*, 776 F.2d at 306 ("all relevant evidence going to the issue of obviousness/nonobviousness, which includes properly presented evidence on secondary considerations, must have been considered prior to reaching a conclusion on obviousness/nonobviousness").

Examiner must evaluate the evidence" if the obviousness question is in doubt.[53] The ultimate determination of patentability is thus made on the entire record.

This evidence, however, has been explicitly ignored by the Examiner, such as in stating he would not consider the effects of hydrostatic pressure because this pressure is not specifically claimed.[54] This is contrary to established patent law, which requires consideration of surprising benefits of a claimed invention whether detailed or not in a claim, as well as evidence of secondary considerations. The evidence submitted, particularly via declarations, provides many examples of secondary considerations. This evidence, which must be considered, overwhelmingly favors a conclusion of nonobviousness.

For instance, Joseph Baugher expressed surprise when removing wooden flooring that had been installed using the methods of the present invention.[55] After the flooring had flooded (during adhesive curing), Mr. Baugher expected to complete the removal of the flooring relatively easily, using standard removal techniques, particularly in light of the fact that during the install, Mr. Baugher used less adhesive than was recommended.[56] Mr. Baugher expected, as was typical in the prior art, that the adhesive between the wooden floor and the concrete would fail. A contracted demolition team, trained in the field of flooring removal, "said they could easily tear up the damaged area with a Sinclair Turbo Stripper, but in the process they broke two of them, and it took three men two days to do the job," when it would normally take less than 8 hours, according to Mr. Hirsch.[57] The strippers that failed were expected to succeed, as they had at many other conventional floor removals, but the adhesive bond between the concrete and the flooring proved too strong for them.[58] In fact, the bond was so strong, Mr. Baugher provided a "scrap of the torn

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53 *Cable Elec. Prods., Inc. v. Genmark, Inc.*, 770 F.2d 1015, 1026 (Fed. Cir. 1985) (quoting *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d at 1539) (opining that secondary considerations must be considered "always not just when the decisionmaker remains in doubt after reviewing the art").

54 Office Action, Page 6.

55 Baugher Declaration ¶ 1-3.

56 *Id.* at ¶ 2.

57 *Id.* at ¶ 3; Supp. Hirsch Declaration ¶ 19.

58 Supp. Hirsch Declaration ¶ 19.

up floor with 1/2" concrete still on it!"[59] The concrete/wood bond did not fail. Mr. Baugher's surprise is a secondary consideration that must taken into account.

Mr. Hirsch declared that the presently claimed invention included numerous surprising advantages in the presently claimed invention versus the prior art.[60] Specifically, use of the water impermeable and/or curable adhesive and nails can withstand pooling of water on the concrete, and improves resistance to warping.[61] Moreover, Mr. Hirsch noted that the adhesive could cure even when moisture is present, at levels understood in the art to be much greater than ambient moisture.[62] In fact, the combination of nails and adhesive was effective in maintaining contact between the floorboard and concrete during elevated hydrostatic pressure conditions.[63] Additionally, Mr. Hirsch noted that the present invention made it surprisingly possible to install wood warped by processes that traditionally rendered the wood unusable for adhesion to concrete.[64]

Additionally, with respect to claim 17, Mr. Hirsch explains that hiding the nails in wormholes is a great advantage in the industry where newly installed floorboards can be made to look aged or can appear to have been installed without nails.[65]

These secondary considerations must be weighed in questions of obviousness, and in this case, the aggregate weight of the secondary considerations weighs favorably for the Appellant.

D. The Present Invention Is Not Obvious in View of Greenway, Searer, Taylor, and Murray

The Examiner alleges that, under 35 U.S.C. 103(a), the combination of Greenway, Searer, Taylor and Murray teaches and suggests claims 14 and 15,[66] which define

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59 Baugher Declaration ¶ 3.

60 Supp. Hirsch Declaration ¶ 6.

61 *Id.*

62 *Id.* at ¶¶ 6 and 17.

63 *Id.*

64 *Id.* at ¶ 4.

65 *Id.* at ¶ 22.

adhesive compositions that have been found by the Applicants to be especially reliable in the environment of wooden floorboards laid on concrete due to their water resistant/moisture-curable properties.[67]

First, Murray does not remedy the deficiencies of the other references, as discussed above, and therefore does not teach or suggest the invention as recited in claims 14 and 15. Furthermore, Murray is related to the installation of ceramic tiles, drywall, exterior sheeting, and wood parquet flooring.[68] Even so, the only flooring mentioned is created with small pieces of wood, which would not present a significant warping problem compared to the claimed floorboards having a length of at least about 3 feet. There is no indication or suggestion to use larger wood planks, and no suggestion that these floorboards could be saved from the effects of hydrostatic pressure, or that these large boards could be adhered to concrete in a pre-warped condition. Additionally, there is no suggestion in Murray to use its adhesive to glue the wood parquet to concrete.

The Examiner's obviousness rejection relies on the argument that it "would have been obvious to combine the polyurethane-based compositions, as taught by Murray, to fill voids and imperfections between construction material and having a rapid cure time."[69] There is no suggestion in Greenway, Searer, or Taylor that a problem of filling voids exists. There is no indication even in Murray that filling voids is an issue to be resolved in flooring. This alleged motivation is basically not found anywhere in the prior art.

The references simply do not disclose or suggest each and every element of claims 14 and 15 of the invention, and therefore, the references, even including Murray, cannot render obvious the present invention.

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66 As noted in the Summary Of Claimed Subject Matter section herein, claim 15 appears with a typographical error, and it is respectfully requested that claim 15 be considered as dependent from claim 14.

67 Office Action, Page 5.

68 Murray 3:15-30.

69 Office Action, Page 7.

8. CONCLUSION

Appellant requests that the rejections of claims 1-3, 5-7, 10, 12, and 14-20 be reversed and that theses claims be allowed.

Respectfully submitted,

Date: June 1, 2006

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Appendix A -- Claims Appendix

The claim on appeal are:

1. A method for attaching solid hardwood floor planks to a concrete surface comprises:

preparing solid wood floorboards having a length of at least about 3 feet for attachment to said concrete floor surface;

applying said floorboards to said concrete floor surface with at least one water resistant, water impermeable adhesive in sufficient quantity to attach said floorboards to said surface;

after said applying step, nailing said boards to said concrete floor surface substantially at right angles thereto, through said boards; and

allowing the adhesive to set.

2. The method of claim 1 wherein said preparing step comprises providing said floorboards with surface wormholes/nailholes/scratches, colors and finishes, or a combination thereof.

3. The method of claim 1 further comprising, before applying said adhesive to concrete floor surface, preparing said concrete floor surface to be clean, dry, smooth, low in surface moisture, and substantially flat.

4. (Cancelled)

5. A floor comprising a concrete floor surface with solid plank wood floor boards having a length of at least about 3 feet adhesively attached thereto, said adhesive being water resistant and water impermeable with no subflooring between said boards and said concrete floor surface, said floor further comprising a plurality of nails that extend at right angles to said concrete floor surface through said boards, through said adhesive and into said concrete floor surface.

6. The floor of claim 5 wherein said boards include surface wormholes/nailholes/scratches, colors and finishes, or a combination thereof.

7. The floor of claim 5 wherein said boards are of varying thicknesses.

8-9. (Cancelled)

10. The method of claim 2 further comprising, before applying said adhesive to said surface, preparing said surface to be clean, dry, smooth, low in surface moisture, and substantially flat.

11. (Cancelled)

12. The floor of claim 6 wherein said boards are of varying thicknesses.

13. (Cancelled)

14. The method of claim 1, wherein the adhesive comprises a moisture-curable polyurethane-based composition.

15. The method of claim 13, wherein the adhesive comprises a prepolymer including a polyol and an isocyanate.

16. The method of claim 1, wherein the floorboards are prepared away from the installation site.

17. The method of claim 1, wherein the floorboards are prepared with surface features that include at least one of wormholes and scratches, and floorboards are nailed by nailing nails into said surface features to hide the nails therein.

18. The method of claim 1, wherein the adhesive is applied to provide an adhesive layer, and the floorboards are nailed through said adhesive layer.

19. The method of claim 1, wherein the adhesive is allowed to set after the floorboards are nailed.

20. A method for installing on a concrete floor surface a floor comprising solid hardwood floor planks, which method comprises:

preparing solid wood floorboards having a length of at least about 3 feet for attachment to said concrete floor surface;

applying said floorboards to said concrete floor surface with at least one water-resistant, moisture-curable adhesive in sufficient quantity to attach said floorboards and said surface;

nailing the boards to the concrete floor surface to hold the boards to the adhesive on the concrete surface as the adhesive sets; and

allowing the adhesive to set and cure to form a water resistant bond between the floorboards and floor surface.

Appendix B -- Evidence Appendix

1. **The "Baugher Declaration"**
   - By Joseph Baugher
   - Filed on April 20, 2005 by the Applicant (acknowledged by the Examiner in the Office Action of July 11, 2005).
2. **The "Grady Declaration"**
   - By Joseph Grady
   - Filed on July 6, 2004 by the Applicant (acknowledged by the Examiner in the Office Action of October 20, 2004).
3. **The "Supp. Hirsch Declaration"**
   - By Richard Hirsch
   - Filed on April 20, 2005 by the Applicant (acknowledged by the Examiner in the Office Action of July 11, 2005).
4. **The "Second Hirsch Declaration"**
   - By Richard Hirsch
   - Filed on July 6, 2004 by the Applicant (acknowledged by the Examiner in the Office Action of October 20, 2004).
5. **The "First Hirsch Declaration"**
   - By Richard Hirsch
   - Filed on October 30, 2003 by the Applicant.

Appendix C -- Related Proceedings Appendix

None